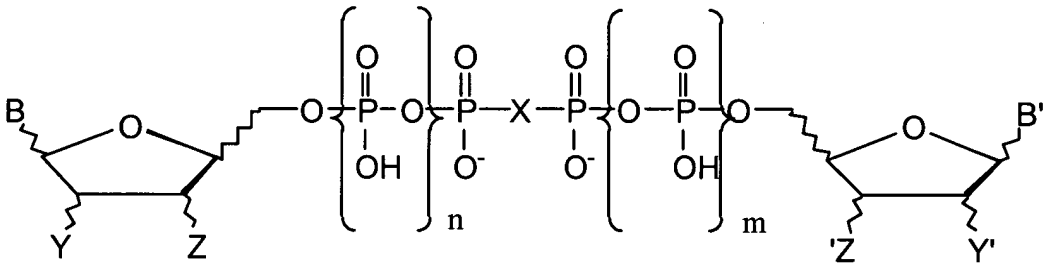
THE AMENDMENTS

In the Claims

11. (Canceled).

12. (Previously Presented) A method of affecting the amount of or properties of the cervical and vaginal mucosa comprising administering an effective amount of a composition comprising a purinergic agent of Formula II, or pharmaceutically acceptable esters of salts thereof, to an individual in need of treatment thereof:

Formula II



wherein:

X is oxygen, methylene, difluoromethylene, imido;

n = 0, 1, or 2;

m = 0, 1, or 2;

n + m=0,1, 2, 3, or 4; and

B and B' are each independently a purine residue or a pyrimidine residue linked through the 9- or 1- position, respectively;

Z = OH or N_3;

Z' = OH or N_3;

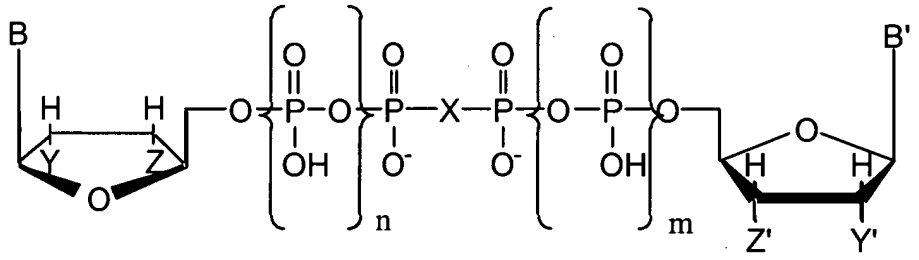
Y = H or OH;

Y' = H or OH;

provided that when Z is N_3, Y is H and when Z' is N_3, Y' is H.

13. (Previously Presented) The method of Claim 12, wherein the compounds of Formula II are those of Formula IIa:

Formula IIa



wherein:

X=O;

n+m=1 or 2;

Z, Z', Y, and Y'=OH;

B and B' are defined in Formulas IIc and IId, or

X=O;

n+m=3 or 4;

Z, Z', Y, and Y'=OH;

B=uracil;

B' is defined in Formulas IIc and IId; or

X=O;

n+m=1 or 2;

Z, Y, and Z'=OH;

Y'=H;

B=uracil;

B' is defined in Formulas IIc and IId; or

X=O;

n+m=0, 1, or 2;

Z and Y=OH;

Z'=N_3;

Y'=H;

B=uracil;

B'=thymine; or

X=O;

n+m=0, 1, or 2;

Z and Z'=N_3;

Y and Y'=H;

B and B'=thymine; or

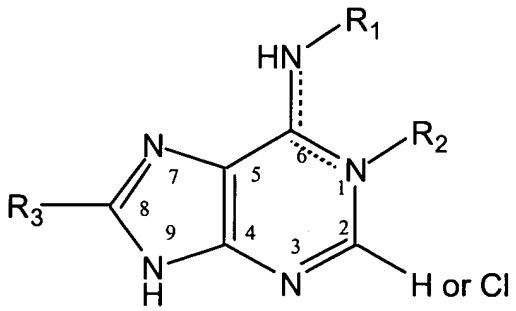
X=CH_2, CF_2, or NH;

n and m=1;

Z, Z', Y, and Y'=OH;

B and B' are defined in Formulas IIc and IId :

Formula IIc



wherein R_1 of the 6-HNR_1 group and R_3 are chosen from the group consisting of:

(a) arylalkyl (C_{1-6}) groups with the aryl moiety optionally substituted,

(b) alkyl,

(c) carbamoylmethyl,

(d) ω-amino alkyl (C_{2-10}),

(e) ω-hydroxy alkyl (C_{2-10}),

(f) ω-thiol alkyl (C_{2-10}),

(g) ω-carboxy alkyl (C_{2-10}),

(h) the ω-acylated derivatives of (b), (c) or (d) wherein the acyl group is either acetyl, trifluroacetyl, benzoyl, or substituted-benzoyl alkyl(C_{2-10}),

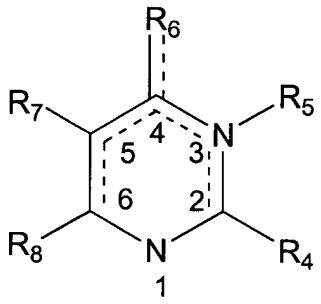
(i) ω-carboxy alkyl (C_{2-10}) as in (e) above wherein the carboxylic moiety is an ester or an amide, and

(j) hydrogen;

R_2 is O or is absent; or

R_1 and R_2 taken together may form optionally substituted 5-membered fused imidazole ring;

Formula IId



wherein:

R_4 is hydroxy, mercapto, amino, cyano, aralkoxy, C_{1-6} alkylthio, C_{1-6} alkoxy, C_{1-6} alkylamino or dialkylamino, wherein the alkyl groups of said dialkylamino are optionally linked to form a heterocycle;

R_5 is hydrogen, acyl, C_{1-6} alkyl, aroyl, C_{1-5} alkanoyl, benzoyl, or sulphonate;

R_6 is hydroxy, mercapto, alkoxy, aralkoxy, C_{1-6}-alkylthio, C_{1-5} disubstituted amino, triazolyl, alkylamino or dialkylamino, wherein the alkyl groups of said dialkylamino are optionally linked to form a heterocycle or linked to N^3 to form an optionally substituted ring; or

R_5 - R_6 together forms a 5 or 6-membered saturated or unsaturated ring bonded through N or O at R_6, wherein said ring is optionally substituted;

R_7 is selected from the group consisting of:

(a) hydrogen,

(b) hydroxy,

(c) cyano,

(d) nitro,

(e) alkenyl, wherein the alkenyl moiety is optionally linked through oxygen to form a ring optionally substituted with alkyl or aryl groups on the carbon adjacent to the oxygen,

(f) substituted alkynyl

(g) halogen,

(h) alkyl,

(i) substituted alkyl,

(j) perhalomethyl,

(k) C_{2-6} alkyl,

(l) C_{2-3} alkenyl,

(m) substituted ethenyl,

(n) C_{2-3} alkynyl and

(o) substituted alkynyl when R_6 is other than amino or substituted amino;

R_8 is selected from the group consisting of:

(a) hydrogen,

(b) alkoxy,

(c) arylalkoxy,

(d) alkylthio,

(e) arylalkylthio,

(f) carboxamidomethyl,

(g) carboxymethyl,

(h) methoxy,

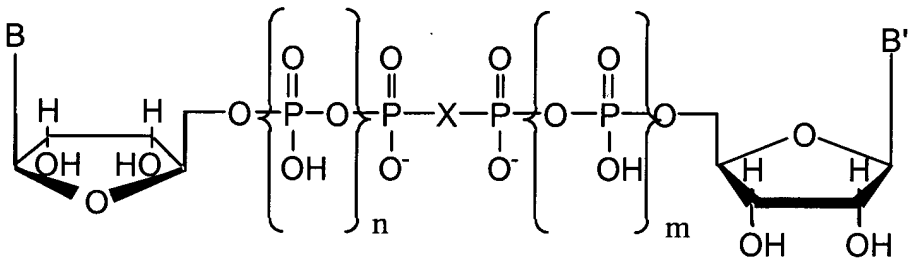
(i) methylthio,

(j) phenoxy and

(k) phenylthio.

14. (Currently Amended) The method of Claim 12, wherein the compounds of Formula II are those of Formula IIb:

Formula IIb



wherein:

X is oxygen, methylene, difluoromethylene, or imido;

n = 0 or 1;

m = 0 or 1;

n + m = 0, 1, or 2; and

B and B' are each independently a purine residue, as in Formula IIc as described in claim [[2]] 12, or a pyrimidine residue, as in Formula IId as described in claim [[2]] 12, linked through the 9- or 1- position, respectively; provided that when B and B' are uracil, attached at N-1 position to the ribosyl moiety, then the total of m + n equals 3 or 4 when X is oxygen.

15. (Previously Presented) The method of Claim 12, wherein the furanose sugar of Formula II is in the ß-D-configuration.

16. (Canceled).

17. (Previously Presented) The method of Claim 12, wherein the purinergic agent of Formula II is administered in an amount effective to treat vaginal dryness.

18. (Previously Presented) The method of Claim 17, wherein the amount of compound of Formula II, administered to the mammal is sufficient to achieve a concentration on the cervical and/or vaginal mucosa of from about 10^{-7} moles/liter to about 10^{-1} moles/liter.

19. (Previously Presented) The method of Claim 17, wherein the amount of compound of Formula II, administered to the mammal is sufficient to achieve a daily dose of between 1 to 1000 milligrams.

20. (Currently Amended) A method of stimulating cervical and vaginal secretions in a mammal in need thereof by administering an effective secretion stimulating amount of a compound of ~~P^1, P^4-di(uridine 5')tetraphosphate~~ P^1, P^4-di(uridine 5'-)tetraphosphate.

21. (Currently Amended) A method of treating a mammal with vaginal dryness by administering an effective vaginal treatment amount of a compound of ~~P^1, P^4-di(uridine 5')tetraphosphate~~ P^1, P^4-di(uridine 5'-)tetraphosphate.